UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,988	12/21/2000	Dominique P. Bonneau	FR999060	1393

7590 12/09/2003

Blanche E. Schiller, Esq.
HESLIN & ROTHENBERG, P.C.
5 Columbia Circle
Albany, NY 12203

EXAMINER	
MOISE, EMMANUEL LIONEL	
ART UNIT	**PAPER NUMBER**
2133	4

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/745,988	Applicant(s) Bonneau et al.
	Examiner Emmanuel L. Moise	Art Unit 2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Aug 22, 2003* .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-36* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Response to Amendment

1. This Office action is responsive to applicant's amendment received on August 22, 2003. Claims 1-36 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The language "analyzing means ... for comparing ***a beginning portion of the recovered test data*** to the frame header, wherein a match between ***the beginning portion of the recovered test data*** and the frame header indicates a positive outcome of said testing." has no support in the specification. The Examiner has reached this conclusion after carefully reviewing the sections of the specification that Applicant refers to as providing support for the above language (Emphasis added).

Applicant is accordingly advised to cancel the above language from the claims since the original specification fails to provide proper antecedent basis for the claimed subject matter.

Claim Rejections - 35 USC § 102

5. Claims 24-28, 32-33, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider (U.S. Patent No. 6,201,829 B1).

As per claims 24, Schneider, in Figure 5, teaches the claimed built-in self test circuit for testing a clock and data recovery circuit comprising: data generating means for generating a test data byte (element 34, and column 7, lines 41-44); serializing means ... (element 52); clock and data recovery means (elements 48 and 56); deserializing means ... (element 58); and analyzing means connected to the output of the deserializing means for comparing the recovered test data byte to the test data byte (element 61, and column 8, lines 24-31). Since one having ordinary skill in the art understands that Schneider's transceiver is functionally tested with regard to operation and speed (column 9, lines 8-9) and that all of the clock inputs are tied to REFFCLK (column 9, line 35), the limitation "wherein an outcome of said testing comprises indicating ***improper operation of the clock and data recovery means***." ~~in~~ as ~~it~~ inherent in Schneider. Emphasis added.

As per claim 25, Schneider also teaches that the clock and data recovery [means] comprises a phase lock loop (Fig. 5, elements 48 and 56).

As per claims 26 and 33, Schneider also teaches that a multiplexer is coupled to the clock and data recovery [means] ... (Fig. 5, element 55).

As per claims 27 and 32, Schneider also teaches a first multiplexer that is coupled to the serializing means ... (Fig. 5, element 35).

As per claim 28, Schneider also teaches a second multiplexer that is coupled to the clock and data recovery [means] ... (Fig. 5, element 55).

As per claim 35, the generating means and the analyzing means of Schneider are inherently controlled by a clock or a state machine

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-23, 29-31, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (U.S. Patent No. 6,201,829 B1).

As per claims 1 and 14, Schneider, in Figure 5, discloses the claimed built-in self test circuit or method for testing a clock and data recovery circuit comprising: data generating means for generating a test data byte (element 34, and column 7, lines 41-44); serializing means ... (element 52); clock and data recovery means (elements 48 and 56); deserializing means ... (element 58). It is noted that although Schneider discloses an analyzing means connected to the output of the deserializing means for comparing the recovered test data byte to the test data byte (element 61, and column 8, lines 24-31), Schneider does not explicitly disclose to indicate a successful testing based on whether there is a match between ***the beginning portion of the recovered test data*** and the frame header. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the claimed invention because one of ordinary skill in the art know of the trade-off that exists in doing a "whole to whole comparison" and a comparison using just part of the data. One is more compact and leads sometimes to better results while the other is faster and may use less hardware.

As per claims 2 and 15, Schneider also teaches that the clock and data recovery [means] comprises a phase lock loop (Fig. 5, elements 48 and 56).

As per claims 3 and 10, Schneider also teaches that a multiplexer is coupled to the clock and data recovery [means] ... (Fig. 5, element 55).

As per claims 4 and 9, Schneider also teaches a first multiplexer that is coupled to the serializing means ... (Fig. 5, element 35).

As per claim 5, Schneider also teaches a second multiplexer that is coupled to the clock and data recovery [means] ... (Fig. 5, element 55).

As per claims 12 and 23, the generating means and the analyzing means of Schneider are inherently controlled by a clock or a state machine

As per claims 16 and 21, the phase lock loop in Schneider's circuit inherently waits for a predetermined period before being allowed to lock to a predetermined frequency.

As per claims 17 and 22, in Schneider, the steps of serializing, recovering, deserializing, and analyzing are inherently repeated for each generated new test data.

8. As per claims 6, 11, 29, and 34, it is noted that Schneider does not explicitly disclose whether the test data is in the form of a SONET frame and that the start of the SONET frame is detected by the analyzing means. However, it is known in the art to use SONET frames when the network in question is a synchronous optical network. It is also known in the art to determine the start and the end of a frame before using it for further processing. Therefore, it would have been obvious to a person of ordinary skill in the art to implement the claimed invention based on the aforementioned common knowledge. The motivation would have been to provide a transceiver circuit of the type adapted to interface between high speed serial data and parallel-type encoded transmission character bytes in accordance with the Fibre Channel interface specification.

As per claims 7, 19, and 30, the generating means and the analyzing means of Schneider are inherently controlled by a clock or a state machine.

As per claims 8, 13, 31, and 36, Schneider does not explicitly disclose that the data generating means is a programmable data generator. However, it would have been obvious to a person of ordinary skill in the art to implement the claimed invention because doing so would have provided a more versatile generator.

As per claims 18 and 20, Schneider does not explicitly disclose the use of a counter included within the state machine to count the number of pulses. One of ordinary skill in the art, however, would have implemented the claimed invention because the use of counter/s in state machines is well known in the art.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel L. Moise whose telephone number is (703)305-9763. The examiner can normally be reached on Monday - Friday from 08:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady, can be reached on (703)305-9595. Any response to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 20231, or faxed to: (703) 746-7239, (for formal communications intended for entry), Or: (703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Emmanuel L. Moise
Primary Patent Examiner
Art Unit 2133

December 6, 2003